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TWO CASES OF

DERMOID CYST OF THE OVARY INVOLVING
THE LARGE INTESTINE

*Removal of Cysts, Resection of Intestine and
End-to-end Suture Recovery*

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*Reprinted from the Boston Medical and Surgical Journal
of April 25 1895*

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BOSTON

DAMRELL & UPHAM, PUBLISHERS

No. 283 WASHINGTON STREET

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TWO CASES OF DERMOID CYST OF THE
OVARY INVOLVING THE LARGE INTESTINE;
REMOVAL OF CYSTS; RESECTION OF IN-
TESTINE AND END-TO-END SUTURE; RE-
COVERY.¹

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THE two following cases of dermoid cyst of the ovary illustrate one of the most serious complications to be met with in the course of abdominal operations. In each the condition was entirely unexpected, and had to be remedied immediately. In one, the resources of a large hospital were at hand; in the other, those of my regular abdominal outfit.

In the first case, after the successful removal of a purulent Fallopian tube, a tumor as large as an orange was found wedged between the uterus and the rectum. This proved to be a dermoid cyst of the left ovary, which grew into the rectal wall and projected into and through its mucous surface. The portion thus attached was about two inches in diameter. The hair from the cyst grew into the lumen of the bowel. The tumor was removed by a clean dissection with scissors. The resulting opening in the bowel was situated deep in the pelvis, and involved the greater portion of the rectal wall.

With the patient in the Trendelenberg position, the opening was closed very satisfactorily by means of interrupted Lembert stitches. The distal and proxi-

¹ Read before the Obstetrical Society of Boston, February 9, 1895.

mal ends were brought together and sutured with great difficulty by means of a long needle-holder.

In the second case the cyst filled the pelvis and involved in its growth the sigmoid flexure. The cyst was gangrenous, and in the necrotic process at least three inches of intestinal wall had been entirely destroyed. The portion of bowel attached to the mesentery was not affected. The tumor contained nothing but hair and fecal matter. Its separation from the bowel was easy, though complete resection was necessary. The whole portion affected by gangrene was removed, until a clean and healthy surface remained. The resulting edges were brought into careful approximation and held there by a single row of interrupted Lembert sutures of silk. Thorough search failed to show any further injury to the bowel.

In both cases provision was made against a possible fecal escape by sterile gauze drainage. In both, this provision proved the saving of the patient, for on the second or third day there was in each case an abundant fecal escape. The drainage, which of necessity followed, was brief. Recovery was rapid, and no interference with nutrition or with peristalsis resulted.

CASE I. Stella C., aged twenty-four, married, dress-maker, entered the Massachusetts General Hospital in July, 1894, with negative family history. She had had one child seven years ago. She has always had leucorrhea, which has been much worse during the last month. Three years ago the patient was attacked with excruciating pain in the right ovarian region, accompanied by excessive vomiting. This attack kept her in bed for nine months. Her menstruation was regular and normal during this time. July 8, 1894, ten days before her catamenia were due, she began to flow profusely. The flowing was accompanied by excruciating pain in the right iliac region, shooting down into

the right leg. For the last two days the hemorrhage and pain have much diminished, while yesterday there was abundant discharge of pus from the vagina. Digestion was good, bowels regular. She was referred from the out-patient department by Dr. Townsend.

Examination showed a fairly developed but poorly nourished woman. The chest was normal. A mass, the size of an orange, could be felt on the right and partly behind the uterus, very sensitive to pressure through the vagina. Palpation of the abdomen showed no tumor or sensitiveness on either side. The uterus was in good position. The urine was normal.

Operation was performed by Dr. Richardson on July 21st, Dr. Cobb assisting. With the patient in the Trendelenberg position, an incision three inches long was made in the median line, below the umbilicus. On introducing the hand into the abdominal cavity, a sausage-shaped tumor could be felt in the right pelvis. This broke, on slight manipulation, and discharged a large amount of pus. The adhesions were carefully separated. The dilated and thickened tube was tied off with silk and removed. Another mass was then found behind the uterus and to the left of it, closely involving the sigmoid flexure and beginning of the rectum. Attempted enucleation showed that the tumor grew from the bowel wall, and was so intimately connected with it that separation without intestinal resection would be impossible. On trying to dissect the tumor from the intestine the cavity of the bowel was extensively opened. The abdomen was thereupon carefully protected with gauze, and the tumor removed by free resection of the intestine. Nearly the entire circumference of the gut was thus excised, the growth having invaded its entire structure and having projected into and through the mucous

layer. The opening in the intestine was closed by interrupted silk sutures applied longitudinally. Drainage of gauze applied about a glass tube was used. The abdominal wound was partially closed by silk-worm-gut sutures.

Recovery from the ether and from the shock was satisfactory. Four days after operation there was a foul and fecal discharge from the tube. This was fully controlled by drainage, and caused no harm. Five days later the tube was removed. She was discharged to the convalescent ward four weeks after the day of operation, with a granulating sinus remaining. She has been perfectly well ever since.

CASE II. Miss A. T., aged thirty-seven. Her father died of pneumonia at sixty-eight; mother at sixty-one from injuries. She had scarlet fever followed by ear trouble when three years old. She has been as well and strong as the average girl. Catamenia began at sixteen, and have been normal. She has always been troubled with constipation.

In January, 1894, about ten months before operation, she was seized with nausea and vomiting accompanied by fever. Her catamenia at this time were about three days late, but she began to flow before the pain started. The physician in attendance called it inflammation of the ovary. The pain lasted two days, and she was in bed five days. At the end of three weeks she was as well as ever, with the exception of a slight discomfort in the right side.

On the 1st of April, four months from the first attack, after a movement of the bowels, severe pain came on in the right side of the abdomen, associated with nausea and vomiting. The pain was so severe that she was doubled up, with the legs flexed upon the abdomen. This attack lasted only twelve hours, when she was perfectly well again.

Four months later, on August 4th, she had a similar attack, with rise of temperature. The pain and tenderness extended over the abdomen and chest. This occurred at the time the catamenia were due. She began to flow three days later, when all the symptoms abated. She was up and about again in two weeks, but she was not as strong as before the attack. The bowels were very irregular, varying from severe constipation to excessive diarrhea. There was continual tenderness on the left side of the abdomen.

About September 9th, a week past her regular menstrual period, she had general abdominal pain, which kept her in bed until the 26th. Her bowels were very irregular, and she suffered much from general distention. Food caused almost constant nausea and distress. There was a slight rise of temperature all the time.

On September 26th she was brought to St. Margaret's from Hyannis.

Examination showed this patient to be rather slight, pale and delicate and much emaciated. Pulse 120, weak and easily compressible. The chest was negative. To the left of the median line, just below the umbilicus, a somewhat indefinite mass could be felt through the abdominal wall. Nothing was perceptible on the right side, although she complained of some soreness in the right ovarian region.

By vaginal examination the pelvic region varied from day to day. At one time nothing positively abnormal could be felt; at others a sense of indefinite boggy resistance. One day a tympanitic prominence above the pubes; at another time what suggested a distended bladder. Bimanually, under ether, an indefinite mass could be felt between the fundus uteri and the abdominal wall.

For the next three weeks the patient was kept

under close observation. Her chief symptom was pain in the thorax which seemed like dry pleurisy; there was also difficulty in digestion. After a week or ten days of careful dieting she was able to take abundant nourishment and stimulation. The bowels, which had previously been irregular, acted well by moderate use of laxative pills. The temperature did not rise more than a degree or a degree and a half, and on many days was normal. On the whole, she seemed to gain in her general condition, so that she could get up for part of the day. The pain in her right side entirely disappeared, but there was still to be felt at times a slight resistance to the left of the median line. After careful consideration an exploratory incision was deemed advisable.

October 16, 1894. A median incision was made below the umbilicus, the patient being in the Trendelenberg position. On opening the peritoneal cavity and introducing the hand, a mass was found everywhere adherent, situated partly behind and partly to the left of the uterus. The abdominal cavity was then carefully protected by gauze barriers, and a large, gangrenous, dermoid cyst, containing pus, hair and feces, was easily separated from its adhesions and removed. Several inches of the sigmoid flexure were found completely destroyed, nothing remaining but the attachment of the mesentery. The whole pelvic cavity was flushed with boiled water, and packed with gauze. The ragged ends of the sigmoid flexure were then drawn into the incision, carefully surrounded with gauze, trimmed with scissors and united by interrupted Lembert sutures. The coil was then replaced in the abdomen and the line of suture protected by gauze. The pelvis was drained by means of a glass tube. The abdominal incision was closed by silkworm-gut sutures.

After the operation she was given stimulative

enemata every four hours. There was no nausea, and after twelve hours the patient was able to take small amounts of milk, lime-water and champagne. This was deemed necessary on account of her poor condition, though usually we do not give nourishment for the first twenty-four hours in abdominal cases.

For several days after the operation her condition was serious. The pulse remained at 120. The temperature gradually came down to normal. The glass tube was sucked out every six hours; the discharge, though serous at first, became fecal after twenty-four hours. The amount of discharge increased until the bowel emptied itself entirely through the wound.

On the third day the patient was taking a fair amount of nourishment and stimulant by mouth; enemata were therefore stopped, as they escaped through the abdominal opening. The temperature was still satisfactory, although her pulse varied around 120, and was very weak.

On the fifth day there was a slight improvement in her general condition, although the discharge of liquid fecal matter and gas from the abdominal opening was enormous. Up to this time absolutely nothing passed by rectum. This condition lasted for eleven days, her general condition improving a little, on the whole. She was able to take nourishment at frequent intervals, but after every feeding there seemed to be an increased amount of discharge from the abdominal opening. As far as the nurse could tell, there had been no discharge of gas by rectum, although the patient thought that two or three times a little had escaped that way.

Fecal movements by the rectum began a few days later, with great relief to the patient. From this time the amount of discharge from the abdominal opening steadily diminished; gas and feces passed freely by rectum. The patient's condition immediately improved,

and she was able to sit up at the end of four weeks, with the abdominal wound entirely granulated.

On the second day after the operation it was observed that the patient was unable to extend her right hand. Examination showed complete musculo-spiral paralysis. During the operation, which lasted something over an hour, the patient's arms had been kept extended above her head.

For four weeks she had massage and electricity every day, with almost no improvement in her condition. At the end of three months the functions of the nerve were entirely restored.

Experiments on the cadaver, made by Dr. Walton and myself since this experience, shows that the nerves of the brachial plexus are brought up against the clavicle when the arms are fully extended over the head. Pressure upon these nerve trunks in this position, continued for an hour or more, seems to be sufficient to produce a temporary paralysis. It is best, therefore, to avoid extending the arms in the use of the Trendelenberg table.

December 27th. Up to ten days ago the patient had improved so that she was up all day, and had decided to take a journey to Chicago—her home. Without any premonitory symptoms she was taken one night with a chill and pain in the right side, with a temperature of 102° . The pain extended the next day over the entire abdomen, which was somewhat distended. In twenty-four hours she began to flow, and after four or five days the symptoms all abated. This attack of pain, her sister says, was similar to attacks that she had previous to the operation.

In the first case the question arose after operation whether, on the whole, it would not have been better to leave the tumor. Up to the time of my operation upon the second case, I was doubtful on this point. The

close relation of the tumor to the bowel, with the increase in size sure to take place, rendered it certain that an operation would some day be necessary, and probable that sooner or later the cyst would get infected. In either event an operation would be imperative; in the former, under difficulties increased by the enlargement and probable adhesions, and in the latter complicated by septic conditions of the most alarming nature. On the other hand, no one could say positively that the dermoid would cause any trouble whatever. So serious an operation as that of opening the rectum would therefore be of doubtful justification, to say the least. In this particular instance the problem was solved by the unexpected and unintentional opening of the rectum. Nothing could be done except immediate enucleation, with such repair of the gut as we might be able to make. The second case throws much light on this important question. The bowel and the tumor, both intimately grown together, after a time became involved in total necrosis. Operation under these unfavorable conditions was clearly imperative. The successful issue is a matter of congratulation hardly to be expected in a second case. In fact, could we have foreseen that a frail woman was to have gangrene of a large dermoid, with sloughing of the intestine for three inches, in which the rotten cyst was to act as the only barrier against a general fecal extravasation; that in the midst of so hopeless a condition her only chance lay in the removal of the tumor, resection and suture of the bowel, and relief of the existing peritonitis — could we have predicted in Case I a reasonable probability that such complication would arise, excision even of the portion of the bowel under the favorable conditions then present would have been deemed imperative.

The most important question in connection with

the operation is that of drainage. The whole question of the method of applying sutures is of no importance if there is under all a possibility, even, of fecal extravasation. Such extravasation is admittedly possible, no matter how you sew; it is the great and the only risk to be feared after that of shock. Fecal extravasation must, therefore, be provided against. This can safely be done by means of gauze barriers, as I have described before, but the use of gauze must not lead to carelessness in making the joint. In the second case I was convinced that the sudden and excessive fecal discharge came, not through the line of sutures, but from an undiscovered spot of necrosis lower down. This disaster was effectually met by the method of drainage used.

With such a provision against accident we are not obliged to use any of the time-taking sutures; nor is a double row essential. On its own merits the interrupted Lembert stitch surpasses all other sutures. It is much more easily and rapidly applied, and it is quite as efficient. All other elements in the question aside, the saving of time is enough to place this method where it belongs — at the head of intestinal sutures. My opinion is based upon many abdominal operations, including twelve intestinal sutures after resection of the entire lumen. Eight have recovered. The fatal cases were (1) shock (woman of sixty-eight, with five days' gangrenous hernia, joint perfect); (2) shock after removal of large, solid abdominal tumor through which the transverse colon ran (joint tight); and (3) exhaustion after complete obstruction for several weeks (joint intact, no extravasation, no peritonitis); (4) shock after excision of four feet of gangrenous intestine. In all other cases, including a resection of ten inches for gangrenous hernia, a resection of the entire ileo-cecal coil, recovery followed.

— THE BOSTON —
MEDICAL AND SURGICAL JOURNAL.

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Sample copies sent free on application.

PUBLISHED BY DAMRELL & UPHAM,

283 Washington St., Boston.

